

REMARKS

Claims 1, 3, 4, 17, 19, 20, 32, 33, 35-37, 39-70, and 72-74 are pending. Claims 1, 3, 4, 17, 19, 20, 32, 33, 35-37, 39-70, and 72-74 stand rejected.

By this Amendment, Applicants have amended claims 1 and 17. The pending claims are 1, 3, 4, 17, 19, 20, 32, 33, 35-37, 39-70, and 72-74.

Rejections Under Section 112

Claims 17, 19 and 20 stand rejected under 35 U.S.C. Section 112, second paragraph, as being indefinite for reasons set forth in the second and third paragraphs on page 2 of the Office Action. Applicants have amended claim 17 to recite that the means for radiating radiation emits radiation having a low visibility for a human and is within the range of 600 nm to 1000 nm. Clearly, this further limits claim 1 and, thus, the rejection of claims 17, 19 and 20 should be withdrawn.

Rejections Under Section 102

Claims 1, 3, 4, 17, 19, 20, 32, 34, 37, 39, and 56 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by "the sun"; claims 1, 17, 33, 36, 37, 39-43, 58 and 61 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by a "helium neon laser"; claims 1, 17, 35-37, 39, 52-58, and 68-70 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by Diamantopoulos; claims 1, 17, 36, 37 and 39-47 stand rejected under 35 U.S.C. Section 102(e) as being anticipated by Hashimoto; claims 1, 17, 36, 37, 39, and 48-51 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by Shimizu; and claims 1, 17 and 72-74 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by "a person viewing themselves in a mirror outdoors." Applicants respectfully submit that these rejections are overcome by the amendments to the claims for the reasons set forth below.

Applicants' invention as recited in claim 1 includes features which are not disclosed or suggested by the cited references, namely:

... an artificial radiation source including ...

... means for providing radiation in a visible wavelength range, and

... means for providing radiation in a predetermined wavelength range of 600 nm to 1100 nm for the purpose of permeating into an organism to maintain/promote biofunctions of the organism ...

... radiant energy of radiation at a wavelength in a range of 1100 nm to 2.5 μ m is greater than zero and smaller than radiant energy of radiation at a wavelength in a range of 600 nm to 1100 nm ...

These features are described in applicants' specification, for example, at page 22, line 13 through page 28, line 16.

According to claim 1, an artificial radiation source provides radiation in a visible wavelength and also provides radiation in a wavelength range of 600 nm to 1100 nm. In addition, the radiation in the range of 1100 nm to 2.5 μ m is greater than zero and smaller than radiant energy of the radiation in the range of 600 nm to 1100 nm.

This is clearly different than the sun, which is not an artificial radiation source. Thus, applicants' claim 1 distinguishes over the sun reference and the Examiner's combination of the outdoor light and a mirror. It is therefore respectfully submitted that the rejection of claim 1 under 35 U.S.C. §102(b) should be withdrawn and the claim allowed.

With respect to the individual rejections based on each of the "helium neon laser," Diamantopoulos, Hashimoto and Shimizu references, applicants respectfully submit that these rejections are overcome by the amendments to the claims for the reasons set forth below.

None of the "helium neon laser," Diamantopoulos, Hashimoto and Shimizu references provide radiation from an artificial source over all of the wavelengths as required by applicants' claim 1. Specifically and as readily admitted by the Examiner, a helium neon laser emits light at 632 nm, but "emit[s] no light in

the 1100nm to 2.5 micron range.” See, Office Action at page 2. Further, none of the Diamantopoulos, Hashimoto or Shimizu references disclose or suggest radiation of energy at a wavelength above 1000 nm. See, col. 6-10 of Diamantopoulos; abstract, table 1 and Figure 1 of Hashimoto; and abstract, Figures 4-11 and 23-25 of Shimizu.

In contrast, applicant invention as recited in claim 1 requires that radiation be emitted at a wavelength greater than 1000nm; specifically, that radiation having a value greater than zero be provided between 1100 nm and 2.5 microns. Thus, applicants’ claim 1 clearly distinguishes over these references. It is therefore respectfully submitted that the rejections of claim 1 under 35 U.S.C. §102(b) and 35 U.S.C. §102(e) should be withdrawn and the claim allowed.

Claims 3, 4, 17, 19, 20, 32, 33, 35-37, 39-70, and 72-74 ultimately depend on claim 1 and, thus, are likewise not subject to the above rejections for at least the reasons set for the above with respect to claim 1.

Claim Rejections Under Section 103

Claims 1, 17, and 56-64 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over Hashimoto in combination with Diamantopoulos; and claims 1, 17, 56-59 and 65-67 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over Shimizu in combination with Diamantopoulos.

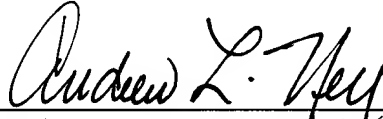
Applicants respectfully submit that these rejections are overcome by the amendments to the claims for the reasons set forth below.

As set forth above with respect to the 35 U.S.C. 102 rejections, none of the Diamantopoulos, Hashimoto or Shimizu references disclose or suggest radiation of energy at a wavelength above 1000 nm. Thus, any combination of these references still lacks this feature of applicants’ claim 1. It is therefore respectfully submitted that the rejections of claim 1 under 35 U.S.C. §103(a), as being unpatentable over the combination of Hashimoto and Diamantopoulos or the combination of Shimizu and Diamantopoulos, should be withdrawn and the claim allowed.

Because claims 17, 56-59 and 65-67 ultimately depend on claim 1 they are likewise allowable for at least the reasons set forth above with respect to claim 1.

In view of the amendments and remarks set forth above, it is submitted that the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully Submitted,



Andrew L. Ney, Reg. No. 20,300
Jacques L. Etkowicz, Reg. No. 41,738
Attorneys for Applicants

JLE/imc/ap

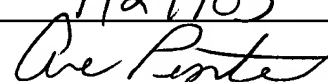
Enclosure: Version with markings to show changes made

Dated: January 29, 2003

P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

The Assistant Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Box AF, Washington, D.C. 20231 on:

1/29/03


VERSION WITH MARKINGS TO SHOW CHANGES MADECLAIMS:

- 1 1. (Twice Amended) A radiant energy radiation apparatus,
2 comprising:
3 an artificial radiation source including:
4 i) means for providing radiation in a visible wavelength range, and
5 ii) means for providing radiation in a predetermined wavelength range
6 of 600 nm to 1100 nm for the purpose of permeating into an organism
7 to maintain/promote biofunctions of the organism,
8 wherein on an irradiated plane irradiated with said radiation in the
9 predetermined wavelength range of 600 nm to 1100 nm, an irradiance at a
10 wavelength in the predetermined wavelength range of 600 nm to 1100 nm is 0.1
11 W/m² or more, and
12 in said irradiated plane, radiant energy of radiation at a wavelength in
13 a range of 1100 nm to 2.5 µm is greater than zero and smaller than radiant energy
14 of radiation at a wavelength in a range of 600 nm to 1100 nm.
- 1 17. (Twice Amended) A radiant energy radiation apparatus
2 according to claim 1, wherein said means for radiating radiation in the predetermined
3 wavelength range radiates radiation having a low visibility for a human within the
4 range of 600 nm to 1100 nm and which deeply permeates into an organism to
5 maintain/promote biofunctions.